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Autore	Nair Kodoth Prabhakaran
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Nota di contenuto	Introduction -- Wild cereal cultivation in Israel – Global warming: An Important Link -- Climate-Evolution: The Interrelationship -- The adaptation range of wild crop species to fluctuations in climate change -- Importance of Crop Wild Relatives -- Crop-wise comparison of domestic gene pool with wild relatives on Ecogeographic Diversity -- Relevance of wild relatives in other crops in plant breeding programs -- Conservation research and Crop Wild Relatives. How does climate change affect Crop Wild Relatives Use? -- The Threats to Crop Wild Relatives -- Gene Flow between cultivated plants and their wild relatives -- In situ conservation research in CWR -- Ex situ conservation research in CWR -- Utilizing CWRs in Major food crops to combat Global Warming -- The CWR of Minor Fruit Crops -- Ecosystem

services of Crop Wild Relatives -- Predictive Characterization of CWRs -- CWR and Prebreeding in the context of the International Treaty of Plant Genetic Resources for Food and Agriculture (ITPGRFA) -- Pre Breeding utilizing CWR -- Economics of CWR under climate change -- Conservation Economics of CWR -- The Millennium Seed Banks: Their Conservation Roles and Svalbard Global Seed Vault -- The Svalbard Global Seed Vault. 1.

Sommario/riassunto

This book critically examines the environmental hazards posed by global warming with regard to future food security, which will depend on a combination of stresses, both biotic and abiotic, imposed by climate change; variability of weather within a growing season; and the development of cultivars that are more sensitive to different ambient conditions. Furthermore, the ability to develop effective adaptive strategies which allow these cultivars to express their genetic potential under changing climate conditions will be essential. In turn, the book investigates those plant species which are very closely related to field crops and have the potential to contribute beneficial traits for crop improvement, e.g. resistance to a wide range of biotic and abiotic stresses, enriching the gene pool, and ultimately leading to enhanced plant yield, known as “Crop Wild Relatives” (CWRs). CWRs hold tremendous potential to sustain and enhance global food security, contributing to human well-being. Accordingly, their development, characterization and conservation in crop breeding programs have assumed great practical importance. Professor Kodoth Prabhakaran Nair is an internationally acclaimed agricultural scientist, with over three decades of experience in Europe, Africa and Asia, holding some of the most prestigious academic positions, including the National Chair of the Science Foundation, The Royal Society, Belgium. A Senior Fellow of the world renowned Alexander von Humboldt Research Foundation of The Federal Republic of Germany, he is best known, globally, for having developed a revolutionary soil management technique, known as "The Nutrient Buffer Power Concept", which, while questioning the scientific fallacies of the highly soil extractive farming, euphemistically known as the "green revolution", has opened up an alternative path for sensible and scientific soil management .